

Author index of Volume 89*

- Argyris, J., I.St. Doltsinis, H. Friz and J. Urban, An exploration of chemically reacting viscous hypersonic flow (1-3) 85-128
Auweter-Kurtz, M., see Gogel, T.H. (1-3) 425-434
- Balasubramanian, B., M. Svoboda and W. Bauer, Structural optimization of I.C. engines subjected to mechanical and thermal loads (1-3) 337-360
Bauer, W., see Balasubramanian, B. (1-3) 337-360
Bendsøe, M.P., see Olhoff, N. (1-3) 259-279
Bergman, C.M. and J.B. Vos, Parallelization of CFD codes (1-3) 523-528
Boerstoel, J.W. and S.P. Spekreyse, An information system for the numerical simulation of 3D Euler flows around aircraft (1-3) 237-257
Bottaro, A., I.L. Rhyning, M.B. Wehrli, F.S. Rys and P. Rys, Laminar swirling flow and vortex breakdown in a pipe (1-3) 41-57
Brauchli, H., see Haas, R. (1-3) 543-556
- Cardona, A., M. Geradin and D.B. Doan, Rigid and flexible joint modelling in multibody dynamics using finite elements (1-3) 395-418
Chen, L., see Kamel, H.A. (1-3) 485-496
Cochelin, B. and M. Potier-Ferry, A numerical model for buckling and growth of delaminations in composite laminates (1-3) 361-380
- Decker, K.M., The Monte Carlo method in science and engineering: Theory and application (1-3) 463-483
Demkowicz, L., see Oden, J.T. (1-3) 11-40
Doan, D.B., see Cardona, A. (1-3) 395-418
Doltsinis, I.St., see Argyris, J. (1-3) 85-128
Doltsinis, I.St. and S. Nölting, Studies on parallel processing for coupled field problems (1-3) 497-521
- Ewing, R.E., J. Shen and J. Wang, Application of superconvergence to problems in the simulation of miscible displacement (1-3) 73-84
- Felicelli, S., see Heinrich, J.C. (1-3) 435-461
Foale, S. and J.M.T. Thompson, Geometrical concepts and computational techniques of nonlinear dynamics (1-3) 381-394
Friz, H., see Argyris, J. (1-3) 85-128

* The issue number is given in front of the page numbers.

- Geradin, M., see Cardona, A. (1-3) 395-418
- Gogel, T.H., M. Auweter-Kurtz, T.M. Götz, E.W. Messerschmid, H.O. Schrade and P.C. Sleziona, Numerical study of high enthalpy flow in a plasma wind tunnel (1-3) 425-434
- Götz, T.M., see Gogel, T.H. (1-3) 425-434
- Haas, R. and H. Brauchli, Fast solver for plane potential problems with mixed boundary conditions (1-3) 543-556
- Hanine, F. and A. Kourta, Performance of turbulence models to predict supersonic boundary layer flows (1-3) 221-235
- Heinrich, J.C., S. Felicelli and D.R. Poirier, Vertical solidification of dendritic binary alloys (1-3) 435-461
- Hughes, T.J.R., see Shakib, F. (1-3) 141-219
- Johan, Z., see Shakib, F. (1-3) 141-219
- Kamel, H.A. and L. Chen, Integration of solid modeling and finite element generation (1-3) 485-496
- Kourta, A., see Hanine, F. (1-3) 221-235
- Lega, J., Defect-mediated turbulence (1-3) 419-424
- Lions, J.L., Earth system models and mathematical remarks (1-3) 1-9
- Messerschmid, E.W., see Gogel, T.H. (1-3) 425-434
- Nölting, S., see Doltsinis, I.St. (1-3) 497-521
- Oden, J.T. and L. Demkowicz, h - p adaptive finite element methods in computational fluid dynamics (1-3) 11-40
- Olhoff, N., M.P. Bendsøe and J. Rasmussen, On CAD-integrated structural topology and design optimization (1-3) 259-279
- Pelz, R.B., Fourier spectral method on ensemble architectures (1-3) 529-542
- Poirier, D.R., see Heinrich, J.C. (1-3) 435-461
- Potier-Ferry, M., see Cochelin, B. (1-3) 361-380
- Rasmussen, J., see Olhoff, N. (1-3) 259-279
- Rhyning, I.L., see Bottaro, A. (1-3) 41-57
- Rozvany, G.I.N. and M. Zhou, The COC algorithm, Part I: Cross-section optimization or sizing (1-3) 281-308
- Rozvany, G.I.N., see Zhou, M. (1-3) 309-336
- Rys, F.S., see Bottaro, A. (1-3) 41-57
- Rys, P., see Bottaro, A. (1-3) 41-57
- Sawley, M.L. and S. Wüthrich, Non-equilibrium hypersonic flow simulations using the second-order boundary layer equations (1-3) 129-140

- Schrade, H.O., see Gogel, T.H. (1-3) 425-434
- Shakib, F., T.J.R. Hughes and Z. Johan, A new finite element formulation for computational fluid dynamics: X. The compressible Euler and Navier-Stokes equations (1-3) 141-219
- Shen, J., see Ewing, R.E. (1-3) 73-84
- Sleziona, P.C., see Gogel, T.H. (1-3) 425-434
- Spekreyse, S.P., see Boerstael, J.W. (1-3) 237-257
- Svoboda, M., see Balasubramanian, B. (1-3) 337-360
- Thompson, J.M.T., see Foale, S. (1-3) 381-394
- Urban, J., see Argyris, J. (1-3) 85-128
- Vos, J.B., see Bergman, C.M. (1-3) 523-528
- Wang, J., see Ewing, R.E. (1-3) 73-84
- Wehrli, M.B., see Bottaro, A. (1-3) 41-57
- Wüthrich, S., see Sawley, M.L. (1-3) 129-140
- Yamamoto, Y., Numerical simulation of hypersonic viscous flow for the design of H-II orbiting plane (HOPE) (1-3) 59-72
- Zhou, M., see Rozvany, G.I.N. (1-3) 281-308
- Zhou, M. and G.I.N. Rozvany, The COC algorithm, Part II: Topological, geometrical and generalized shape optimization (1-3) 309-336

Subject index of Volume 89*

Boundary layers

- Non-equilibrium hypersonic flow simulations using the second-order boundary layer equations, M.L. Sawley and S. Wüthrich (1-3) 129-140
Performance of turbulence models to predict supersonic boundary layer flows, F. Hanine and A. Kourta (1-3) 221-235

Conformal mapping

- Fast solver for plane potential problems with mixed boundary conditions, R. Haas and H. Brauchli (1-3) 543-556

Coupled problems

- Structural optimization of I.C. engines subjected to mechanical and thermal loads, B. Balasubramanian, M. Svoboda and W. Bauer (1-3) 337-360
Numerical study of high enthalpy flow in a plasma wind tunnel, T.H. Gogel, M. Auweter-Kurtz, T.M. Götz, E.W. Messerschmid, H.O. Schrade and P.C. Sleziona (1-3) 425-434
Studies on parallel processing for coupled field problems, I.St. Doltsinis and S. Nölting (1-3) 497-521

Dynamics

- Geometrical concepts and computational techniques of nonlinear dynamics, S. Foale and J.M.T. Thompson (1-3) 381-394
Rigid and flexible joint modelling in multibody dynamics using finite elements, A. Cardona, M. Geradin and D.B. Doan (1-3) 395-418

Finite difference methods

- Numerical study of high enthalpy flow in a plasma wind tunnel, T.H. Gogel, M. Auweter-Kurtz, T.M. Götz, E.W. Messerschmid, H.O. Schrade and P.C. Sleziona (1-3) 425-434
Parallelization of CFD codes, C.M. Bergman and J.B. Vos (1-3) 523-528

* The issue number is given in front of the page numbers.

Finite element and matrix methods

- h-p* adaptive finite element methods in computational fluid dynamics, J.T. Oden and L. Demkowicz (1-3) 11 - 40
- Application of superconvergence to problems in the simulation of miscible displacement, R.E. Ewing, J. Shen and J. Wang (1-3) 73 - 84
- An exploration of chemically reacting viscous hypersonic flow, J. Argyris, I.St. Doltsinis, H. Friz and J. Urban (1-3) 85 - 128
- A new finite element formulation for computational fluid dynamics: X. The compressible Euler and Navier-Stokes equations, F. Shakib, T.J.R. Hughes and Z. Johan (1-3) 141 - 219
- On CAD-integrated structural topology and design optimization, N. Olhoff, M.P. Bendsøe and J. Rasmussen (1-3) 259 - 279
- The COC algorithm, Part I: Cross-section optimization or sizing, G.I.N. Rozvany and M. Zhou (1-3) 281 - 308
- The COC algorithm, Part II: Topological, geometrical and generalized shape optimization, M. Zhou and G.I.N. Rozvany (1-3) 309 - 336
- Structural optimization of I.C. engines subjected to mechanical and thermal loads, B. Balasubramanian, M. Svoboda and W. Bauer (1-3) 337 - 360
- Rigid and flexible joint modelling in multibody dynamics using finite elements, A. Cardona, M. Geradin and D.B. Doan (1-3) 395 - 418
- Vertical solidification of dendritic binary alloys, J.C. Heinrich, S. Felicelli and D.R. Poirier (1-3) 435 - 461
- Studies on parallel processing for coupled field problems, I.St. Doltsinis and S. Nölting (1-3) 497 - 521

Fluid mechanics

- h-p* adaptive finite element methods in computational fluid dynamics, J.T. Oden and L. Demkowicz (1-3) 11 - 40
- Laminar swirling flow and vortex breakdown in a pipe, A. Bottaro, I.L. Rhyming, M.B. Wehrli, F.S. Rys and P. Rys (1-3) 41 - 57
- Numerical simulation of hypersonic viscous flow for the design of H-II orbiting plane (HOPE), Y. Yamamoto (1-3) 59 - 72
- Application of superconvergence to problems in the simulation of miscible displacement, R.E. Ewing, J. Shen and J. Wang (1-3) 73 - 84
- A new finite element formulation for computational fluid dynamics: X. The compressible Euler and Navier-Stokes equations, F. Shakib, T.J.R. Hughes and Z. Johan (1-3) 141 - 219
- Fourier spectral method on ensemble architectures, R.B. Pelz (1-3) 529 - 542

Gas dynamics

- An exploration of chemically reacting viscous hypersonic flow, J. Argyris, I.St. Doltsinis, H. Friz and J. Urban (1-3) 85 - 128

General Rayleigh-Ritz and Galerkin techniques

- A new finite element formulation for computational fluid dynamics: X. The compressible Euler and Navier-Stokes equations, F. Shakib, T.J.R. Hugher and Z. Johan (1-3) 141-219

Incompressible and near incompressible media

- Laminar swirling flow and vortex breakdown in a pipe, A. Bottaro, I.L. Rhyming, M.B. Wehrli, F.S. Rys and P. Rys (1-3) 41-57
 Application of superconvergence to problems in the simulation of miscible displacement, R.E. Ewing, J. Shen and J. Wang (1-3) 73-84

Material physics

- Vertical solidification of dendritic binary alloys, J.C. Heinrich, S. Felicelli and D.R. Poirier (1-3) 435-461

Modern computer architecture

- An information system for the numerical simulation of 3D Euler flows around aircraft, J.W. Boerstoel en S.P. Spekreyse (1-3) 237-257
 Studies on parallel processing for coupled field problems, I.St. Doltsinis and S. Nölting (1-3) 497-521
 Parallelization of CFD codes, C.M. Bergman and J.B. Vos (1-3) 523-528
 Fourier spectral method on ensemble architectures, R.B. Pelz (1-3) 529-542

Nonlinear mechanics

- Studies on parallel processing for coupled field problems, I.St. Doltsinis and S. Nölting (1-3) 497-521

Numerical solution procedures

- h-p* adaptive finite element methods in computational fluid dynamics, J.T. Oden and L. Demkowicz (1-3) 11-40
 Geometrical concepts and computational techniques of nonlinear dynamics, S. Foale and J.M.T. Thompson (1-3) 381-394
 The Monte Carlo method in science and engineering: Theory and application, K.M. Decker (1-3) 463-483
 Integration of solid modeling and finite element generation, H.A. Kamel and L. Chen (1-3) 485-496
 Fast solver for plane potential problems with mixed boundary conditions, R. Haas and H. Brauchli (1-3) 543-556

Optimization

- The COC algorithm, Part I: Cross-section optimization or sizing, G.I.N. Rozvany and M. Zhou (1-3) 281-308
- The COC algorithm, Part II: Topological, geometrical and generalized shape optimization, M. Zhou and G.I.N. Rozvany (1-3) 309-336

Optimization and design of structures

- On CAD-integrated structural topology and design optimization, N. Olhoff, M.P. Bendsoe and J. Rasmussen (1-3) 259-279
- Structural optimization of I.C. engines subjected to mechanical and thermal loads, B. Balasubramanian, M. Svoboda and W. Bauer (1-3) 337-360

Phase changes

- Vertical solidification of dendritic binary alloys, J.C. Heinrich, S. Felicelli and D.R. Poirier (1-3) 435-461

Problems in physics

- Earth system models and mathematical remarks, J.L. Lions (1-3) 1-9

Shells and plates

- A numerical model for buckling and growth of delaminations in composite laminates, B. Cochelin and M. Potier-Ferry (1-3) 361-380

Solution of integral equations (singularity method)

- Fast solver for plane potential problems with mixed boundary conditions, R. Haas and H. Brauchli (1-3) 543-556

Solutions of ordinary and partial differential equations

- An information system for the numerical simulation of 3D Euler flows around aircraft, J.W. Boerstoel and S.P. Spekreyse (1-3) 237-257

Stability in structural mechanics

- A numerical model for buckling and growth of delaminations in composite laminates, B. Cochelin and M. Potier-Ferry (1-3) 361-380

Stochastic processes

- The Monte Carlo method in science and engineering: Theory and application, K.M. Decker (1-3) 463-483

Structural mechanics

- Rigid and flexible joint modelling in multibody dynamics using finite elements, A. Cardona, M. Geradin and D.B. Doan (1-3) 395-418
- Integration of solid modeling and finite element generation, H.A. Kamel and L. Chen (1-3) 485-496

Subsonic flow

- An information system for the numerical simulation of 3D Euler flows around aircraft, J.W. Boerstoeel and S.P. Spekreyse (1-3) 237-257

Supersonic flow

- An exploration of chemically reacting viscous hypersonic flow, J. Argyris, I.St. Doltsinis, H. Friz and J. Urban (1-3) 85-128
- Performance of turbulence models to predict supersonic boundary layer flows, F. Hanine and A. Kourta (1-3) 221-235

Thermal effects and thermodynamics

- Non-equilibrium hypersonic flow simulations using the second-order boundary layer equations, M.L. Sawley and S. Wüthrich (1-3) 129-140

Transport phenomena

- An exploration of chemically reacting viscous hypersonic flow, J. Argyris, I.St. Doltsinis, H. Friz and J. Urban (1-3) 85-128

Turbulence

- Performance of turbulence models to predict supersonic boundary layer flows, F. Hanine and A. Kourta (1-3) 221-235
- Defect-mediated turbulence, J. Lega (1-3) 419-424

Viscous flow

- Numerical simulation of hypersonic viscous flow for the design of H-II orbiting plane (HOPE), Y. Yamamoto (1-3) 59-72
- An exploration of chemically reacting viscous hypersonic flow, J. Argyris, I.St. Doltsinis, H. Friz and J. Urban (1-3) 85-128
- Non-equilibrium hypersonic flow simulations using the second-order boundary layer equations, M.L. Sawley and S. Wüthrich (1-3) 129-140
- Numerical study of high enthalpy flow in a plasma wind tunnel, T.H. Gogel, M. Auweter-Kurtz, T.M. Gözl, E.W. Messerschmid, H.O. Schrade and P.C. Sleziona (1-3) 425-434